

## A NESTING RECORD OF THE MASKED BOOBY FROM GUERRERO, SOUTHERN MEXICO

JOSÉ ALFREDO CASTILLO-GUERRERO, JUAN PABLO CEYCA, and ERIC MEL-LINK, Centro de Investigación Científica y de Educación Superior de Ensenada, B.C., Apdo. Postal 360, Ensenada, Baja California, México (U.S. mailing address: CICESE, P.O. Box 434844, San Diego, California 92143-4844); emellink@cicese.mx

The Masked Booby (*Sula dactylatra*) nests on tropical islands around the world (Nelson 1978, Pitman and Jehl 1998). In the eastern Pacific Ocean it nests on oceanic islands hundreds of kilometers from the coast, including the Rocas Alijos (Baja California), Clarión and San Benedicto (in the Revillagigedo Islands), and Clipperton (Pitman and Jehl 1998, AOU 1998). Its main feeding area is near and west of Clipperton and the Revillagigedo Islands, on the border of the Northern Equatorial Countercurrent (Pitman and Jehl 1998). There are no previous reports of this species breeding on near-shore islands in the eastern Pacific. Here we report the nesting of two pairs of Masked Boobies at Morros del Potosí (17° 31' N, 101° 29' W).



Figure 1. Masked Boobies, adult and chick, on Morros del Potosí, Guerrero, México, 11 June 2006.

Photo by Juan Pablo Ceyca

## NOTES

Morros del Potosí (known as White Friars Rocks to American boaters) are three small islands and some detached rocks 15 km east of the city of Zihuatanejo, in the state of Guerrero, southern México, and 3 km from the coast. They are 50–65 m high, very steep, and devoid of vegetation. The islands support a large colony of the Brown Booby (*S. leucogaster*) as well as breeding Red-billed Tropicbirds (*Phaethon aethereus*), Bridled Terns (*Sterna anaethetus*), and Brown Noddies (*Anous stolidus*) (Mellink and Riojas-López 2005). Between January and June 2006 we visited the island closest to shore on eight occasions to study the breeding ecology of Brown Boobies.

On 4 January we found two nests guarded by adult Masked Boobies. The adults had bright yellow bills, yellow irides, and grayish-green legs, the attributes distinguishing the Masked from the similar Nazca Booby (*S. granti*). Each nest contained two eggs. The parents alternated in their attendance of the nests, but in the late afternoon all four parents were present. Both nests were on rocks at the top of the island, the island's only relatively flat and open area. There were Brown Booby nests 3 m from the Masked Booby nests.

On 27 January one of the Masked Booby nests contained one egg, the other a chick of about one week of age [we used chick-plumage ontogeny in the Blue-footed (*Sula nebouxii*) and Brown Boobies to approximate its age]. On 24 February both nests were empty, but two adults were standing about 50 m from them. On 1 April, one pair was incubating two eggs in one of the former nests, suggesting an attempt at renesting. On 13 May this nest contained a chick about two weeks old. On 11 June the chick, now approximately six weeks old, was still in the nest and appeared healthy (Figure 1).

Our observation could document the formation of a new colony. In boobies, new colonies apparently form rarely, as breeding is greatly influenced by the social stimuli provided by a minimum number of conspecific individuals (Coulson 2001). New breeders are usually recruited into established colonies (Forbes and Kaiser 1994). Nesting in a colony other than the natal colony is rare but documented in the Sulidae, with long-distance dispersal more frequent than short-distance dispersal (Huyvaert and Anderson 2004, Castillo-Guerrero and Mellink 2007).

Juveniles and subadults that use a certain area for some years to rest and interact socially, however, could form the nucleus of a new colony (Coulson 2001). The Masked Boobies on Morros del Potosí could represent such a case, as even after abandoning their nests they remained in the vicinity. Their breeding success was low, possibly reflecting lack of experience, typical of young individuals. No Masked Boobies had been seen on previous visits to Morros del Potosí (Howell and Engel 1993, Mellink and Riojas-López 2005), although they have been recorded in low numbers along the Mexican Pacific coast, mostly in pelagic waters (Pitman and Jehl 1998). Our record from Morros del Potosí is atypical in three ways. First, the islands are close to land; Masked Boobies nest typically on pelagic islands far from continents. Second, the nests were atop a steep rocky island, a habitat typical of the Nazca Booby, rather than on a low, flat, open island, as typical for the Masked. Third, Morros del Potosí are close to the Gulf of Tehuantepec, the main foraging grounds of the Nazca Booby but not of the Masked, which rather forages west of the Revillagigedos and Clipperton.

The ecological anomalies of Masked Boobies nesting on Morros del Potosí suggest that the characteristics so far reported as the species' breeding habitat might result not from actual habitat selection but just be the characteristics of the traditional colonies. Whether the pairs breeding on Morros del Potosí eventually lead to the formation of a new colony or abandon this site and, perhaps, be recruited into an existing colony elsewhere can be known only with further research. Finding out will increase our knowledge of the ecology of this species and of Sulidae in general.

Funding of this work was provided by the Consejo Nacional de Ciencia y Tecnología (CONACyT), through a grant to Mellink to study Brown Boobies in western Mexico.

## NOTES

We thank Armando Bañuelos and Jorge Cabrera for transporting us to Morros del Potosí and Xitlali Herrera and José Maria Aguilar for field assistance.

## LITERATURE CITED

- American Ornithologists' Union. 1998. Checklist of North American Birds, 7th ed. Am. Ornithol. Union, Washington, D.C.
- Castillo-Guerrero, J. A., and E. Mellink. 2007. Long-distance natal dispersal in Blue-footed Boobies. *Waterbirds* 30(2): in press.
- Coulson, J. C. 2002. Colonial breeding in seabirds, in *Biology of Marine Birds* (E. A. Schreiber and J. Burger, eds.), pp. 87–113. CRC Press, Boca Raton, FL.
- Forbes, S., and Kaiser, G. W. 1994. Habitat choice in breeding seabirds: When to cross the information barrier. *Oikos* 70:377–384.
- Howell, S. N. G., and Engel, S. J. 1993. Seabirds observations off western Mexico. *W. Birds* 24:167–181.
- Huyvaert, K. P., and Anderson, D. J. 2004. Limited dispersal by Nazca Boobies *Sula granti*. *J. Avian Biol.* 35:46–53.
- Mellink, E., and Riojas-López, M. E. 2005. Breeding seabirds of Morros del Potosí, Guerrero, México. *W. Birds* 36:59–63.
- Nelson, J. B. 1978. *The Sulidae: Gannets and Boobies*. Oxford Univ. Press, Oxford, England.
- Pitman, R. L., and Jehl, J. R., Jr. 1998. Geographic variation and reassessment of species limits in the “Masked” boobies of the eastern Pacific Ocean. *Wilson Bull.* 110:155–170.

*Accepted 17 May 2007*